

Claims:

1. A cleaning device, comprising:  
a cleaning pad capable of being adhered to a substrate that cleans a probe element of a prober wherein the probe element is capable of being inserted into the cleaning pad; and  
wherein the cleaning pad further comprises a working surface into which the probe element is inserted, the working surface having a characteristic that permits the prober to determine the location of the working surface of the cleaning pad.
2. The cleaning device of Claim 1, wherein the characteristic of the working surface of the cleaning pad further comprises a matte surface finish that is formed by a release liner removed from the working surface prior to use so that a prober that uses optical energy is able to detect the location of the working surface of the cleaning pad.
3. The cleaning device of Claim 1, wherein the characteristic of the working surface of the cleaning pad further comprises a conductive surface so that a prober that uses conductance is able to detect the location of the working surface of the cleaning pad.
4. The cleaning device of Claim 3, wherein the cleaning pad further comprises an additive so that the cleaning pad is conductive.
5. The cleaning device of Claim 4, wherein the additive further comprises at least one of conductive carbon-graphite particles or fibers, metal plated abrasive particulates or fibers, and metallic particulates or fibers.
6. The cleaning device of Claim 3, wherein the cleaning pad further comprises a conductive polymer.
7. The cleaning device of Claim 6, wherein the conductive polymer further comprises one of polyanilenes, polypyrroles and polythiophenes.
8. A method for fabricating a cleaning device whose working surface is capable of being detected by a prober device, the method comprising:  
forming a cleaning device having a working surface; and  
removing a layer from the working surface wherein the removal of the layer imparts a matte finish to the working surface of the cleaning device.

9. The method of Claim 8, wherein forming the cleaning device further comprises forming a first release liner layer, forming a cleaning pad layer having a working surface on the first release liner layer, forming an adhesive layer on the cleaning pad layer, and forming a second release liner layer on the adhesive layer wherein the first release liner layer is removed to create the matte finish of the working surface.

10. A method for the automatic detection of a cleaning device, comprising:  
detecting a working surface of the cleaning device; and  
performing a cleaning operation based on the detected working surface of the cleaning device.

11. The method of Claim 10, wherein the detecting further comprises directing optical energy towards the working surface of the cleaning device and determining the location of the working surface of the cleaning device based on the optical energy reflected off of the working surface of the cleaning device.

12. The method of Claim 10, wherein the detecting further comprises measuring the conductance of the working surface of the cleaning device in order to determine the position of the working surface of the cleaning device.

13. A method for testing semiconductor devices in an automatic cleaning mode, the method comprising:  
performing testing of semiconductor devices;  
during the testing operation, automatically determining that a cleaning is to be performed;  
automatically determining the location of a working surface of a cleaning device based on a characteristic of the working surface;  
performing the cleaning using the cleaning device; and  
continuing the testing of semiconductor devices.

14. The method of Claim 13, wherein determining that cleaning is to be performed further comprises measuring the parameters of each semiconductor device being tested and initiating a cleaning step when the measured parameters vary from a normal value.

15. The method of Claim 13, wherein determining that cleaning is to be performed further comprises performing a cleaning step after a predetermined number of testing operations.

16. The method of Claim 13, wherein determining the working surface of the cleaning device further comprises directing optical energy towards the working surface of the cleaning device and determining the location of the working surface of the cleaning device based on the optical energy reflected off of the working surface of the cleaning device.

17. The method of Claim 13, wherein determining the working surface of the cleaning device further comprises measuring the conductance of the working surface of the cleaning device in order to determine the position of the working surface of the cleaning device.

18. The method of Claim 13, wherein performing the cleaning further comprises moving a probe element in a horizontal motion.

19. The method of Claim 13, wherein performing the cleaning further comprises moving a probe element in an orbital motion.

20. A method for cleaning a probe element of a prober for semiconductor devices, the method comprising:

providing a cleaning device having pad;  
inserting the probe element into the pad; and  
wherein a tip of the probe element is reshaped during the cleaning.

21. A method for refurbishing a probe element of a prober for semiconductor devices, the method comprising:

providing a cleaning device having pad;  
inserting the probe element into the pad; and  
wherein a tip of the probe element is refurbished during the cleaning.

22. A method for testing packaged semiconductor devices, the method comprising:  
performing testing of the packaged semiconductor devices;  
during the testing operation, automatically determining that a cleaning is to be performed;  
automatically determining the location of a working surface of a cleaning device based on a characteristic of the working surface;

performing the cleaning using the cleaning device; and  
continuing testing of packaged semiconductor devices.

23. The method of Claim 22, wherein determining that cleaning is to be performed further comprises measuring the parameters of each semiconductor device being tested and initiating a cleaning step when the measured parameters vary from a normal value.

24. The method of Claim 22, wherein determining that cleaning is to be performed further comprises performing a cleaning step after a predetermined number of testing operations.

25. The method of Claim 22, wherein determining the working surface of the cleaning device further comprises directing optical energy towards the working surface of the cleaning device and determining the location of the working surface of the cleaning device based on the optical energy reflected off of the working surface of the cleaning device.

26. The method of Claim 22, wherein determining the working surface of the cleaning device further comprises measuring the conductance of the working surface of the cleaning device in order to determine the position of the working surface of the cleaning device.

27. The method of Claim 22, wherein performing the cleaning further comprises moving a probe element in a horizontal motion.

28. The method of Claim 22, wherein performing the cleaning further comprises moving a probe element in an orbital motion.

29. The cleaning device of Claim 1, wherein the cleaning pad further comprises an abrasive incorporated into the cleaning pad.

30. The cleaning device of Claim 29, wherein the abrasive further comprises one of aluminum oxide, silicon carbide and diamond.